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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/183,715	10/30/1998	VINCENTZIO I. ROMAN	500.709US1	3436
34206	7590	03/12/2004	EXAMINER	
FOGG AND ASSOCIATES, LLC P.O. BOX 581339 MINNEAPOLIS, MN 55458-1339			TRAN, CONGVAN	
			ART UNIT	PAPER NUMBER
			2683	

DATE MAILED: 03/12/2004 22

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/183,715

Applicant(s)

ROMAN, VINCENTZIO I.

Examiner

CongVan Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This Office Action is in response to Amendment filed on April 01, 2003.
2. Claims 1, 12, 21, 31, 40, and 46 have been amended.
3. Claims 55-69 have been added.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-11, 21-30, 40-54 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. "a plurality of different communication circuits" was not supported in the specification only for a different subscribers and users, different communications areas, and different polarization.

#### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-69 are rejected under 35 U.S.C. 102(b) as being anticipated by Bossard et al. (5,668,610).

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Regarding claims 1-4, Bossard discloses LMDS transmitter array with polarization diversity sub-cells, comprising a number of communication circuits disposed to divided a region into communication areas (see fig.1, elements 11-14, and its description); wherein each communication circuit communicates using a first polarization in a first portion of its communication area and communicates using a second, different polarization in a second portion of its communication area (see fig.1, elements 12V, 12H; 13 H, 13V; and its description); and wherein adjacent first portions of communication areas for a plurality of different communication circuits use the same polarization to form substantially linear communication regions of same polarization (see fig.1, elements 11-13, 11V; 12V, 12H; 13 H, 13V; 14V and its description).

Regarding claims 5, 8, 17, 25, 27, 35-36, 49, 52, 57, Bossard further discloses the first and second portion of each communication area comprises approximately one haft of the communication area (see fig.1, elements 12, 12H, 12V, fig.5, and its description).

Regarding claims 6-7, 26, 43, 50-51, 58, Bossard further a number of sector within each communication are, each sector communicating on a subband of a frequency spectrum (see fig.1, elements 12, sector 12H, 12V and each sector has different polarization and has different sudband of a frequency spectrum its description).

Regarding claims 9-11, 18-20, 28-30, 37-39, 44-45, 53-54 Bossard further discloses each communication circuit transmits and receives using first and second polarization (it is inherent for each communication circuit (base station) in telecommunication system, see fig.1, elements 12, 12H, 12V, fig.5, and its description)

Regarding claims 12-16, Bossard discloses LMDS transmitter array with polarization diversity sub-cells, comprising a number of communication circuits disposed to form substantial linear boundaries between communication areas (see fig.1, elements 11-14, and its description); and wherein the communication circuits use a first polarization in one of the communication regions and a second, different polarizations for signals communicated in communication regions adjacent to the one of the communication regions (see fig.1, elements 12V, 12H; 13 H, 13V; and its description).

Regarding claims 21-24, Bossard discloses LMDS transmitter array with polarization diversity sub-cells, comprising dividing a region into a number of communication areas, each communication area including a communication circuit (see fig.1, elements 11-14, and its description); communicating using a first polarization in a first portion of each communication area (see fig.1, element 12, H horizontal polarization and its description); communicating using a second polarization in a second portion of each communication area (see fig.1, element 12, V vertical polarization and its description); and wherein adjacent first portions of communication areas for a plurality of different communication circuits use the same polarization to form communication region belts having the same polarization (see fig.1, elements 11-13, 11V; 12V, 12H; 13 H, 13V; 14V and its description).

Regarding claims 31-34, Bossard discloses LMDS transmitter array with polarization diversity sub-cells, comprising forming boundaries between bands of communication regions by disposing a number of communication circuits (see fig.1, elements 11-14, and its description); communicating using a first polarization in a first

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band (see fig.1, element 12, H horizontal polarization and its description); and communicating using a second polarization in bands that are adjacent region to the first band (see fig.1, element 12, V vertical polarization and its description).

Regarding claims 40-42, Bossard discloses LMDS transmitter array with polarization diversity sub-cells, comprising forming a number of communication areas, each communication area including a communication circuit, each communication circuit communicating a first polarization in a first portion of each communication area and a second polarization in a second portion of each communication area (see fig.1, elements 11-14, element 12, H horizontal polarization, V vertical polarization and its description); forming a number of communication regions in belts of either the first or second polarization wherein adjacent first portions of communication areas for a plurality of different communication circuits use the same polarization (see fig.1, elements 11-13, 11V; 12V, 12H; 13 H, 13V; 14V and its description); and forming a number of sectors within each communication area, where the first and second portions of communication area are divided along a number of boundaries of the sectors, each sector communicating on a different sub band of frequency spectrum (see fig.1, elements 1213, 12V, 12H and its description).

Regarding claims 46-48, Bossard discloses LMDS transmitter array with polarization diversity sub-cells, comprising a number of a communication circuits disposed to divide a region into communication areas (see fig.1, elements 11-14, and its description); wherein each communication circuit communicating using a first polarization in a first portion of its communication area and communicates using a

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second, different polarization in a second portion of its communication area (see fig.1, elements 12, H horizontal polarization, V vertical polarization and its description); and wherein adjacent first portions of communication areas for a plurality of different communication circuits use the same polarization to form communication region strips of the same polarization (see fig.1, elements 11-13, 11V; 12V, 12H; 13 H, 13V; 14V and its description).

Regarding claims 55-56, 59, Bossard discloses LMDS transmitter array with polarization diversity sub-cells, comprising a first plurality of communication circuits disposed in a first row (see fig.1, elements 12, 32, and its description); a second plurality of communication circuits disposed in at least one additional row (see fig.1, elements 11, 31 and its description); wherein the first plurality of communication circuits and the second plurality of communication circuits use a first polarization between first row and at least one additional row (see fig.1, elements 12, 32, 11, 31, 12V, 32V, 11V, 31V and its description); wherein the first plurality of communication circuits and the second plurality of communication circuits use a second, different polarization for communications not between the first and at least one additional rows (see fig.1, elements 12, 32, 11, 31, 12H, 32H, 11H, 31H and its description).

Regarding claims 60-62, Bossard discloses LMDS transmitter array with polarization diversity sub-cells, comprising a number of communication circuits disposed along a boundary first and second substantially linear communication regions (see fig.1, elements 11-14, and its description); wherein each communication circuit communicates with a first polarization in the first communication region on one side of the boundary

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and a second, different polarization in the second communication region on the other side of the boundary (see fig.1, elements 12, H horizontal polarization, V vertical polarization and its description).

Regarding claim 64, (see fig.1, elements 12, 32, 11, 31, 12V, 32V, 11V, 31V and its description).

Regarding claim 65, Bossard discloses LMDS transmitter array with polarization diversity sub-cells, comprising disposing a plurality of communication circuits on a boundary between first and second region (see fig.1, elements 11-14, and its description); configuring each of the plurality of communication circuits to communicate using a first polarization in the first region (see fig.1, elements 11-12, 11V, 12V, and its description); configuring each of the plurality of communication circuits to communicate using a second polarization in the second region (see fig.1, elements 11-12, 11H, 12H, and its description).

Regarding claims 66-68, (see fig.1, elements 12, 32, 11, 31, 12V, 32V, 11V, 31V and its description).

Regarding claim 69, Bossard discloses LMDS transmitter array with polarization diversity sub-cells, comprising disposing a first plurality of communication circuits in a first row (see fig.1, elements 12, 32, and its description); disposing a second plurality of communication circuits in at least additional row (see fig.1, elements 11, 31 and its description); configuring the first plurality of communication circuits and the second plurality of communication circuits to use a first polarization between the first row and the at least additional row (see fig.1, elements 12, 32, 11, 31, 12V, 32V, 11V, 31V and



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its description); configuring the first plurality of communication circuits and the second plurality of communication circuits to use a second, different polarization for communications not between the first row and the at least additional row (see fig.1, elements 12, 32, 11, 31, 12H, 32H, 11H, 31H and its description).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CongVan Tran whose telephone number is 703-305-4024. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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